Exhibit 1

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND, NORTHERN DIVISION

SABEIN BURGESS,
Plaintiff,
vs.) Case No. 1:15-CV-00834-RDB
BALTIMORE POLICE DEPARTMENT, et al.,
Defendant.

The deposition of WAYNE D. NIEMEYER, taken before Christina M. Cummins, CSR and Notary Public, pursuant to the Federal Rules of Civil Procedure for the United States District Courts pertaining to the taking of depositions, at 311 North Aberdeen, in the City of Chicago, Cook County, Illinois at 10:58 a.m. on the 18th day of August, A.D., 2017.

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case?
A Yes.
Q Okay. I was going to get to that, explain later, I didn't understand the context of that chart as I read this as to where it, you know, if it was from one of these particles or something. I see, your own data from firing projects. And do you know how long ago those were, those firing projects?
A There's a variety of them. I think the oldest one might have been around 2010, 2009.
Q So each line -- or I'm going to have to mark it because I'm going to ask you about it now. You have a copy over there?
A Yes, I do.
Q Okay. I'll just mark this copy. I'll give it to you, but you can look at your copy. I'll mark it as three.
MR. FIELDS: This is the rebuttal report?
MR. BARNARD: Yes, sir.
(Document marked as Niemeyer Deposition Exhibit 3 for identification.)
Q Is that a copy of your rebuttal report, sir?

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A Yes, it is.
Q Okay. Let's talk about the table on page four. Do I understand that each row represents the total particles from a different test firing project you did?
A Yes, each one is --
MS. KLEINHAUS: Just object to the form of the question. Sorry. Go ahead.
A Each row is a separate test.
BY MR. BARNARD:
Q Okay. So these weren't all done the same day or for the same gun or same project?
A No.
Q Okay. The year range in which these tests were conducted, I think you said the last one was probably around 2009, 2010? First one being, like what's the year range these cover?
A From 2009, 2010 to 2014.
Q Okay. So nothing prior to '09 you're pretty confident?
A No, I don't think so. No, I'm pretty confident that there's nothing prior to '09.

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Q Have you ever personally fired a handgun?
A Yes.
Q And then had yourself tested for GSR?
A I did that one time.
Q Is that one of the tests that's on this chart?
A No.
Q Okay. Do you have that result, did you look at those results?
A Yes, I did. I have a cabin up in northern Wisconsin that I can do target practice with. And I was a hunter for awhile. My dad introduced me to all that. But anyway, I have a .22 caliber revolver, and I was curious to see how much gunshot residue would deposit on my hand shooting two shots and also at a target 25 feet away, and I wanted to see what would deposit around the bullet holes.
So I shot the gun. I had the tape lift stub with me. I didn't even move my hand. I was outside and it was a calm day. I didn't move my hand at all. And I tape lifted the back of my hand and around the thumb and forefinger area, the web between my thumb and forefinger, and then took the target and cut out the

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areas where the bullets were, the bullet holes were and came back to the lab and analyzed it.
The stub that I had from my hand I found only two GSR particles. And in the .22 caliber ammunition, it was rim fire ammunition rather than a primer cap. That type of ammunition and this particular ammunition that I had did not have the antimony component in it. It was only lead/barium. But I found two lead/barium particles on my hand. And on the target I found residues from probably the gun powder, organic type stuff, and also bullet materials, lead from the bullet.
Q .22's are interesting in that they're slightly different, though, their ammunition, right, like you said they don't have the antimony?
A Not all of the manufacturers use the antimony component, but some do have it. So you don't know for sure unless you get the ammunition or the spent cartridge case.
Q So these tests, all of the tests on this chart, are these all the tests or did you only pick a few of them?
A I just picked a few of them. There were some

more that were further back. There was one in particular that I wanted to find because I had -- there was thousands of particles on the hand from the shooters on those things. But I couldn't find that data. It was back, it was way back, early on. And the project file is still available, which I didn't ask the secretary to go into the archives in the basement and try to pull out that project file, but I wanted that one, too, but I just couldn't get to the data or get it in time. I couldn't find the data. That was too old for our network storage systems, you know, computer system.

Q So all of these -- these tests were all controlled tests, like were they indoor, outdoor?

A They were indoor from the information I was given, yeah. Yeah, they were controlled tests with -- in a firing range without any ventilation turned on or anything like that.

Q Do you know if they were all handguns?

A They were handguns, yes.

Q And obviously there's a range of particle counts going from 87 to 603 and a range of fractions from 5 percent to 53 percent. What is the scientific

reason why even though these are all controlled tests, known firers, that there's such a tremendous range?

MS. KLEINHAUS: Just object to the form of the question. You can answer. Go ahead.

A Oh. Probably different types of guns, different types of ammunition. Probably mainly the different type of gun revolver versus semiautomatic pistols.

BY MR. BARNARD:

Q So these varied? You don't know the mix of revolvers, calibers, automatic?

A I don't know the mix of the specific guns, no.

Q Is it your contention that if a shooter on two different days in the exact same environment used the same gun with the exact same kind of ammunition that these numbers, the total number of particles and the fraction, should pretty much be the same?

A I would certainly expect that, but you won't know until you actually do the analysis.

Q Have you ever seen any scientific studies or literature saying that the scenario that I just said, that they should be within, you know, some standard

deviation but approximately the same?

MS. KLEINHAUS: Just object to the incomplete hypothetical, but go ahead, you can answer.

A I don't recall anything like that, no.

BY MR. BARNARD:

Q In your expertise if, let's say, myself and the court reporter, sorry to drag you into this, each shot a gun, like I shot one, then she came up and shot the same gun and we each had the same type of ammunition, the same gun, that the two of us, if we did everything else the same, should have the same, generally the same amount of particles and the same fraction as each other?

A Again, I have no scientific basis to make that conclusion about that. We'd have to do the analysis and the experiment to find out.

Q Okay. And none of the tests you did included that kind of analysis, did it, to see if it would be identical sequentially if it's the same gun and same ammunition? Have you ever done a test like that?

A No, I have not.

Q Okay. Do you have any kind of certifications

or anything in the field of forensics or studies, anything like that?

A No, I have no certifications. The laboratory has accreditation from A2LA or 17025 accreditation.

Q I suspect that you wouldn't get -- your office wouldn't get work from law enforcement agencies if it wasn't accredited.

A That would be the assumption, yeah. The accreditation is mainly for the pharmaceutical companies.

Q I see.

A They absolutely insist on it, and the Food and Drug Administration, but the accreditation applies to all other things, too.

Q Speaking of that, do you get into some of your -- using some of these machines, the scan electron microscope or microprobe, when you're analyzing things in like, you know, trade disputes, patent disputes between drug manufacturers, is that the kind of work that you would get engaged in?

A Most of the work is involved with just identifying and characterizing contamination-type

Let's move on.
BY MR. BARNARD:
Q Is it possible to determine -- well, scratch that.
I want to talk briefly about your discussion of the -- when you give the opinion that the GSR test results for Mr. Burgess's hands were most likely the result of transfer, tell me kind of in your own words what are the main things you're relying on to come up with that conclusion.
A Well, the specific environment of the case, small area in the basement, two shots fired, a plume of smoke was still seen in the basement by one of the police officers. They could smell the smoke. There's a lot of gunshot residue in that room, in that whole area. There's a lot of gunshot residue in there, around there.
Mr. Burgess knelt down to cradle her, and you would expect that with a close range shot that there's going to be quite a bit of gunshot residue deposited not only on her but also on the floor nearby her where she fell. And Mr. Burgess was in that environment and was able to come into contact with all of that material,

even material that's still settling from the smoke plume.
But the main thing that I came up with looking at the -- at Mr. Van Gelder's data was the presence of an extraordinarily high quantity of lead and lead/barium -- lead/antimony particles, I'm sorry, lead and lead/antimony particles. That was very unusual from at least my experience in casework to see that high of a quantity of those types of particles.
And lead and lead/antimony particles are typically associated with bullet fragments. Bullet fragments are produced in the gun as the bullet goes down the barrel, scraping against the barrel, just friction wear particles coming out of the gun traveling with the bullet down the line of sight of the bullet. The bullet strikes an object. Particles are shed from it. If the object that's struck is fairly hard, there could be even more particles produced as the bullet starts to let's say crack or disintegrate, deform, so forth.
And when I saw the high quantity of the lead and lead/antimony particles, to me that was a big clue

that indicated that this might not have come from firing a gun. You don't see that kind of particle distribution on the hands of someone that has fired a gun. The main bullet fragments are from down range of the gun. And I feel that Mr. Burgess picked those particles up when he knelt down to cradle the victim.
Q So I understand your conclusion then, are you saying you can completely eliminate the possibility that he was -- shot a gun or near a gun at the time it was shot?
A I would not completely eliminate the possibility, no.
Q How does your analysis of the hair particle inform that opinion?
A That's the issue of how easily GSR particles can be transferred. And, again, there's very little studies about that. And this was a particular case that I was able to work on that did involve hair being contaminated with gunshot residue from a gun that was fired within inches of this woman's head leaving a dark smudge in her hair.
And that lock of hair was sent in to us for

analysis to see if it was just plain dirt or if it was gunshot residue. And we took out -- I should say I took out a strand of hair, a couple strands of hair, just looked at it under a microscope and saw that the hair was almost completely covered with dark material. And in a polarized lab microscope you can see the internal structure of hair with transmitted light. In this case I couldn't even see anything through the hair. All I could see was just black. But on reflected light I could see that it was covered with dark particulate.
So what we did was took a strand of hair and just draped it lightly over one of those GSR collection stubs and picked it up, put it down a couple more times along the length of the strand of hair. And then we were going to analyze it in the scan electron microscope. Just a quick just manual survey I could see that just about everything there was gunshot residue, lead/barium/antimony particles.
So instead of doing a full automated analysis, because that would have been probably thousands of particles, I focused in on one small area of a cluster of them to get what we call an elemental map of the

requiring more dabs for effective collection versus less is indicative of whether it's easier or harder to transfer off of a substance?

A I'm sorry, what was that again?

Q Do you have an opinion as to whether or not the fact it requires more dabs for effective collection from an object than another is an indicator as to whether or not transference is more difficult from one object to another?

A I wouldn't make that conclusion, no.

Q You don't have an opinion one way or the other?

A No, I don't have an opinion for that, because that would have to be studied again.

Q So you agree that the impact or relevance of the potential for transfer from the hair is a topic that would require further study to adequately predict how products or items would transfer off it?

A Certainly.

Q Is it appropriate -- well, let me rephrase that.

Much of the testimony you've given here today

is explaining your interpretation of events or of facts in light of your own experience of reading prior tests, is that correct?

MS. KLEINHAUS: I'm sorry, did you say prior tests?

MR. BARNARD: Yes.

A Yes.

Q Is that a proper method for a GSR analyst to use when interpreting GSR results?

MS. KLEINHAUS: Just object to the form of the question. That's an incomplete hypothetical, but you can answer.

A Repeat the question again.

BY MR. BARNARD:

Q Is comparing the results of the SEM, the findings of the SEM to an individual analyst's own empirical experience and review of past known tests and results a proper and legitimate methodology for interpreting new test results?

A I would say yes.

Q I'm going to go to Exhibit 3. Do you have a copy of your supplemental?

A I have a copy of the --

Q Or rebuttal?

A -- the text of it.

Q Yeah.

A That's all it was. Yeah, I have it.

Q Okay. Good. Now, you started to talk about this earlier in terms of you immediately -- the percentage of lead and lead/barium particles stood out to you as significant when you read the results.

A Yes.

Q When's the first time -- I'm sorry, had they stood out to you as significant when you read the results before you made your first report?

A Yes.

Q Did you learn of the Wolten articles after you wrote your first report?

A No.

Q Did you learn more information about the particle counts after your first report?

A The particle counts?

Q Yes.

A No.

Q Did you know Mr. Van Gelder's position on -- his opinions on transference at the time of your first report?

A Yes, I knew that.

Q So what new information did you get that you were responding to from the time of your first report to the time of your rebuttal report?

A In the first report I concluded that the likelihood of GSR particles found on Mr. Burgess's hands were from transfer. And when I saw the report from Mr. Michael Knox, he had pretty much the same opinion as Mr. Van Gelder. And I thought, wait a minute, neither one of them took into account the frequency of the types of particles that were present in that data. I just presumed that they would have seen that or taken that into account. Any analyst would look for some sort of anomaly in their data.

And to me, the lead and lead/antimony particles, the high quantity of them in Van Gelder's data was an anomaly. And I suddenly realized after I read Knox's report that he didn't recognize that either or didn't address it if he did recognize it.

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So I thought, well, in my rebuttal I'm going to have to explain this in much more detail about the issue of bullet fragments being down line, down range from the gun. And most of the particles that were found on Mr. Burgess's hands appeared to be bullet fragments.

Q So you'd agree that you hadn't included it in your first report but you knew that at the time of your first report?

A I knew it certainly, yeah.

Q And you agree that Mr. Knox did not give any discussion of particle percentages in his report?

MS. KLEINHAUS: Just object to the form of the question. You can answer.

A In his report he repeated the number of particles that were found during that analysis by Mr. Van Gelder. He summarized them again. So he had the numbers there.

BY MR. BARNARD:

Q He did not make a conclusion about ratios or particle percentages in his report?

A No, he did not.

MR. BARNARD: Tess, do you have a copy of

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Mr. Knox's report with you by any chance?

MS. KLEINHAUS: I might. It might be part of --

MR. BARNARD: For your own use.

MS. KLEINHAUS: Oh, for my own use. Yes, I do.

(Document marked as Niemeyer Deposition Exhibit 8 for identification.)

BY MR. BARNARD:

Q I will hand you Exhibit 8, Mr. Niemeyer. It's unfortunately a thick document. I'm handing Exhibit 8, James. It's Mr. Knox's report.

MR. FIELDS: Okay.

BY MR. BARNARD:

Q Is this the report you previously had a chance to review a copy of, appears to be anyway?

A Yes.

Q Okay. Other than the rebuttal information you include in your rebuttal report, was there anything else in Mr. Knox's report that you hadn't addressed in your first report that you need to address or that you want to address?

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A No, I don't think so.

Q Okay. Can I take that back from you? Because that's the only copy I got. We'll just do this little game here back and forth. He includes -- this is from page 53, paragraph 1155. I'd like you to take a look at that particular paragraph and read it to yourself.

A Okay.

Q Let me take that back and see what that paragraph says. Do you disagree with that paragraph?

A I don't disagree with that paragraph as it's stated there, but I would disagree that there should be something added to it.

Q What would you add to it?

A I would add to it that there's also no empirical literature showing that the transfer possibility is very small.

Q Okay. I'm not going to try and oversimplify this, but I'm going to anyway. Am I right that between you and Knox, there's just no evidence to show one way or the other as to which possibility is more likely?

A Oh, I disagree with that.

Q Is there scientific evidence to support a

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conclusion one way more likely?

A I believe so, yes.

Q And what is that scientific evidence?

A The preponderance of the lead and lead/antimony particles on Mr. Burgess's hands.

Q Is there anything other than that?

A No, that's the main thing that I found to support my conclusion and the scientific data showing that away from the gun most of the residues that are deposited are bullet fragments, lead/antimony fragments.

Q Well, it's your main scientific point. The first time you brought that up was in your rebuttal report, is that correct?

A Yes.

Q We'll talk, I guess it's the Wolten articles, other than the Wolten articles is there any literature or scientific text or anything supporting your opinion that the percentage of lead and lead/barium particles is indicative of essentially what end of the gun the particles came from?

A I think I put those into my rebuttal report. There's a couple of other article references relating to

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Q You done with that? I'll take that back from you. So I guess my question for you is also have you ever reviewed any of the statements or testimony by Charles Dorsey?

A No, I don't recall that either.

Q I can't represent this as true as to what happened, but at least his testimony is that he shot at least one of the shots from the staircase when Miss Dyson was still standing down in the basement.

A Okay. I'm not --

Q Suggesting some -- it's not like a pointblank -- the way he described it didn't sound like it was a pointblank type situation.

A Okay.

Q Does that distance, now, we know that Mr. Van Gelder found at least 13, 15 particles of three-component particles, is that distance, how far that would be for at least one of the shots, relevant to you? Because it was the head shot here that's allegedly not the close range shot. Is that relevant to your opinion?

A No.

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Q Okay. So the distance from shooting is not a critical factor in reaching the conclusion you've reached?

A That's correct.

Q Okay. Now, of the two articles other than Wolten, what were the other articles that you were indicating might have been relevant to this particular issue that you were talking about, distance down-range shots, bullets, whether that was the Ravreby and the Nag article? Is that what you're referring to?

A Oh, let's see. No, it was the Ueyama article and the Nag article.

Q The Nag article, okay. Let's talk briefly about the -- and neither of those discuss the concept of transference, correct?

A That's correct.

Q These dealt with on down range shots over a certain distance you're more likely to find primarily bullet fragments?

A Correct.

Q In the Wolten article, one of the points -- you're relying on the Wolten article for his -- well, what are you relying on the Wolten article for, let's start with that? That might be easier.

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A I'm relying on the Wolten article for the tables one, two and four that appear on page three of my rebuttal report.

Q And the surrounding text to those tables or just the tables themselves?

A Just the tables themselves.

Q Okay. Are you familiar with the conditions of the tests that produced those tables?

A They were test firings from the various calibers of weapons. And as I recall the sampling was taken immediately after the firing. There's more details in the article about that I'm sure, but it seemed like a pretty controlled test.

MR. BARNARD: I'm marking that article as Exhibit 10.

(Document marked as Niemeyer Deposition Exhibit 10 for identification.)

Q Are you aware whether or not the test used lead bullets or coated bullets?

A I don't recall at this point. I'd have to look at the article again.

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(Document marked as Niemeyer Deposition Exhibit 11 for identification.)

Q I'm going to show you what's been marked as Exhibit 11. Do you have a copy of this, Tess?

MS. KLEINHAUS: I don't have a copy of this, but I'll just take a look.

BY MR. BARNARD:

Q Mr. Niemeyer, I'm showing you what's been marked as Exhibit 11. Are you familiar with this document? Have you seen it before?

A I do not believe I've seen this, no.

Q Do you recognize that type of document, have you seen anything like that before, what it means, what it's about?

A It's describing a bullet.

Q I'll take it back. So let's assume that this document represents a finding by the forensic analyst, in this case Mr. Wagster, that the jacket type of the round used that was recovered from Miss Dyson had a jacket of copper alloy.

A Uh-huh.

Q Okay. How does whether or not a round is coated or not coated affect the types of particles you tend to find at the target?

A That I don't know.

Q One of the things Mr. Wolten states is that -- well, he makes this distinction between categories of bullet versus primer particles. Do you understand what that distinction means, what he's talking about there?

A What I believe he's talking about there is the lead and lead/antimony type particles as bullet material, the other particles are primer particles. That's the lead/barium/antimony type particles and the two-component particles that would go along with it, the population of particles from the primer itself, not from the bullet.

Q So you understand the distinction he was drawing was a chemical-based or an elemental-based distinction?

A Yes.

Q If it were that he's saying the bullet and things that accompany the bullet out the muzzle he's calling bullet particles and those things that otherwise

exit the firearm, you know, out the back are primer particles, let's assume it's one of those two scenarios, do you understand that distinction?

A Yes.

Q Okay. He uses the phrase the distinction of bullet versus primer particles is descriptive but it's arbitrary. Why is the description of -- why would trying to distinguish bullet particles versus primer particles be arbitrary?

MS. KLEINHAUS: I'm sorry, can you give him the passage that you're looking at?

MR. BARNARD: Sure, I'll point him right to it.

Q Actually there's a paragraph right above it, a one-sentence paragraph -- you know, from the top of this Post-it note to the bottom, if you could read that, that would be great.

MR. BARNARD: And beyond that if the context --

BY MR. BARNARD:

Q I'm just asking you to read that. If you need to read other things, go ahead.

A Okay. You're asking me to look at page 411 of Wolten's article --

Q Yes.

A -- from 1979, and beginning with the sentence that says particles that contain more than traces of barium and ending with the sentence before the heading of morphology and size. And I can go beyond or --

Q Whatever you need.

A Whatever I want, okay. Okay.

Q Did you get to review everything you wanted to review?

A Yes.

Q First question, the sentence the particles that contain more traces -- more than traces of barium, antimony or silicon are classified as primer particles, do you agree with that?

A Yes.

Q He then says the simple division into bulletin primer particles is highly useful for descriptive purposes, but it is arbitrary. Why do you think he said it was arbitrary?

A I don't know.

Q Do you believe it's arbitrary?

A I don't think it's that arbitrary, no.

Q Okay. One of the points I believe you're relying on is a statement where he says most of the lead particles are derived from bullet and in this report are classified as bullet particles, provided that in addition to lead they contain only elements that can come from a coating or jacket and provide that they contain no more than a trace of antimony. Do you understand what he means by that?

A Uh-huh.

Q So in his mind what he's talking about, what is a bullet particle, a particle that contains more than a trace of antimony could not be a bullet particle, correct?

A That's what that statement's implying there, yes. He hasn't defined trace, by the way.

Q Well, I think that's -- trace evidence is a well accepted -- would you agree the phrase trace evidence is a generally accepted term in the use of criminologists and criminalists and laboratory technicians?

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BY MR. BARNARD:

Q But do you have any reason to doubt that Mr. Wolten when he published the same year as he published the article you referenced to talked about the interpretations of the test and didn't even mention the possibility of GSR from a victim to a subject's hands?

MS. KLEINHAUS: Object, calls for speculation. If you read it and you know you can answer.

A Yeah, I don't know for sure. I haven't read that article. I have the article, but I didn't read it.

BY MR. BARNARD:

Q Is it your opinion in your rebuttal report that the higher percentage of lead particles above those percentages identified in the Wolten article make it more likely than not that the GSR particles found on Mr. Burgess was from the muzzle end of a weapon?

A Yes, down range of the weapon.

Q And that would include even the three component particles that Mr. Van Gelder identified?

A Yes.

Q Other than this 1979 article and the other two articles that you have mentioned dealing with bullet

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fragments down range, is there any study supporting the idea that percentage of lead particles is predictive or indicative of what end of the gun the GSR came from?

A Well, I think the -- those articles already tell that, that the bullet fragments are coming from the barrel of the gun, down the barrel of the gun when the gun is fired, down range.

Q I understand that that's -- they describe what the lead particles. My question for you is is there any study that says when you find three-component particles, that those -- you can use that analysis to determine that those three-component particles are not from primer but they are from the down-range portion of the weapon?

A Well, you said not from primer.

Q That they're not primer particles but that they're related to the bullet.

A Oh, no, no, there's no studies like that.

Q Is the use of a percentage of lead particles test a widely accepted methodology for interpreting GSR SEM results?

MS. KLEINHAUS: I'll just object to the extent it calls for a legal conclusion or what is widely

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accepted. You can answer.

A I think for any analyst looking at data with multiple materials that have been identified, I don't care if it's GSR or anything else, you have to look at the population of each individual type of article to see if there's any things that are anomalous.

BY MR. BARNARD:

Q I understand that response. My question's slightly different. Is the comparison of percentages and identification of a certain threshold perhaps established by Wolten an accepted practice for determining which end of the gun GSR particles come from?

A You're asking if there's published studies about that?

Q We'll start with is there published studies about that?

A Not that I'm aware of, no.

Q Is it a generally accepted methodology that analysts use to your knowledge to compare the percentages of lead particles to determine which end of the gun the three-component particles came from?

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MS. KLEINHAUS: Just object to the form. You can answer.

A No.

BY MR. BARNARD:

Q Can you think of any expert that you know of, either a criminal case, civil case or otherwise, who's used the same or similar methodology to give an opinion about how three-component GSR particles were put on a particular surface?

A There have been studies showing distance of travel for primer particles. I don't believe they were done before 1994. There's more recent studies that have been done. The biggest one that I know of is from Michael McVicker & Company up in Canada. They did some studies on their shooting range setting up targets at various distances down range, and they were able to find that primer particles do travel that far. It's up to, you know, 50 feet away that it could travel that far.

That was something that was not generally known or realized until some of those studies came out. There's a couple others I think that showed similar results. The speculation is that the primer material is

discussed, even the principles of those things in that article?

MS. KLEINHAUS: Just object to form as vague as to what things in principles, but you can answer.

BY MR. BARNARD:

Q Whatever principles you're describing --

A I'm talking about any results for any analysis work, whether it's GSR or anything else, the analyst needs to have a good solid critical look at the data that's been obtained to look for something that might be an anomaly.

Q And in this instance the anomaly you're referring to is the elevated percentages of lead and lead and barium particles in the collection or the identification?

A Lead and antimony particles, not lead and barium. You said lead and barium.

Q Is it antimony?

A It's lead and lead/antimony particles that are highly elevated.

Q Okay. So it's not elevated barium particles?

A Correct.

Q Is it there's elevated antimony particles or elevated combined and lead and antimony particles?

A There's two types of particles that he listed in his data, lead, which would be just lead only as the element that he put in there, and then lead plus antimony.

Q Okay. Can I see that exhibit for a second, sir? Are you aware of anywhere in this document or other guidance put out by the FBI prior to 1995 that suggested an analysis of the ratio between lead, lead and antimony particles and other particles?

A No. Wait a minute. I have to take that back. I refer back to the Wolten article that showed the tables showing the bullet fragment fractions versus the total particles.

Q Other than the Wolten article, and would you agree with me that the Wolten article does not suggest as an analytical tool that the analyst should do a comparison of the percentages of the particles to identify the source of the particles?

A Okay. I'll agree with that.

Q So excluding what the findings of the test are in the Wolten article, are you aware of any guidance put out by testing agencies or advisory councils or things like the McCrone Institute that would suggest an analyst in 1995 or prior that they should after performing an SEM do an analysis of the ratios of the different types of particles and draw a conclusion from those ratios?

A I don't know of any published information like that.

Q Okay. Turning to Exhibit 7, this is the report. If -- I think, you know, originally I asked you about this and you indicated that you thought Mr. Van Gelder had checked the correct box on this report.

A Yes.

Q And then you were asked some questions about there's a sentence in there, which specific phrase do you disagree with in that conclusion you checked?

A I think it was the last sentence. It says most probably, however, the subject's hands were immediately adjacent to the discharging firearm or were themselves used to fire the firearm within a few hours

of time.

Q So given your understanding, that view or disagreement with that sentence, which block should Mr. Van Gelder have checked?

MS. KLEINHAUS: I'll just object to the form that it mischaracterizes his prior testimony which wasn't about which box he should or should not have checked, it was about whether anything was misleading in the last sentence.

MR. BARNARD: Okay. I'll just object for the record that my prior question to him was about which box should be checked.

Q And I'm just saying, do you believe now, do you change your answer based on that other question about which block Mr. Van Gelder should have checked?

A No, I do not change my opinion of that.

Q That's all I wanted to know. I just wanted to make sure you weren't changing your answer.

A No.

Q Generally your opinions of Mr. Van Gelder, other than his trial testimony which you've very clearly stated certain disagreements about, is there any action

he took prior to trial that you believe he did incorrectly?

A No.

Q I'll take that back. The Knox report, the two sections you were asked about that you indicated would be your rebuttal, your rebuttal report was in response to paragraphs 10.2.1.2 and 10.2.1.3 was what I understood from the testimony you just gave. Am I summarizing that correctly?

A Yes.

Q While they were in response to those paragraphs, was there anything in your supplemental report that you did not know at the time you made your original report?

MS. KLEINHAUS: Object to the form in terms of --

A No.

BY MR. BARNARD:

Q Okay. And while in 10.2.1.3 Mr. Knox discusses the numbers of total particles, can we agree that nowhere in his report does he make any assertions or opinions in his report about the significance of the

ratios between the various particles?

A That's correct, he makes no reference to that.

Q Just to clarify what I understand your testimony was about studies related to the transfer of particles, and I think my question was were you aware of a study or any finding of transference where there was over three three-component particles, I believe even though you have some clarifying answers, is your answer to that question still yes?

A Are there any studies that show transfer of more than three GSR particles?

Q Yes.

A I think I said no, I don't know of any of those.

Q I'm trying to figure out if the questions that you were asked by counsel has changed that answer in any way.

A No.

Q Okay. And when you found in the case where you found just a single particle on the sock, I think it's in the Kamm, is it the Kamm case?

A It's the Kamm case, yes.

Q What was the basis for you finding that that was the result of a transfer?

A I just said it was a possibility that it was a transfer. That's as far as I needed to go with it.

Q Okay. Is there any widely accepted standard in the field, either test, evaluation, criteria or otherwise, to deciding whether or not particles were placed directly from the weapon or transferred?

A No, not that I'm aware of.

MR. BARNARD: I have nothing else.

MS. KLEINHAUS: I have nothing based on that. I think you are a free man.

MR. BARNARD: Read and sign?

MS. KLEINHAUS: Oh, yes. You can --

THE WITNESS: Yes, please.

MS. KLEINHAUS: Great.

(WITNESS EXCUSED.)

STATE OF ILLINOIS)
) SS.
COUNTY OF C O O K)

The within and foregoing deposition of the aforementioned witness was taken before Christina M. Cummins, C.S.R., and Notary Public, at the place, date and time aforementioned.

There were present during the taking of the deposition the previously named counsel.

The said witness was first duly sworn and was then examined upon oral interrogatories; the questions and answers were taken down in shorthand by the undersigned, acting as stenographer and Notary Public; and the within and foregoing is a true, accurate and complete record of all of the questions asked of and answers made by the aforementioned witness, at the time and place herinabove referred to.

The signature of the witness was not waived, and the deposition was submitted, pursuant to Rules 30(e) and 32(d)4 of the Rules of Civil Procedure for the United States District Court, to the deponent per copy of the attached letter.